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SECURITY INFORMATION

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MERCHANT SHIPPING IN THE USSR

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Note

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MERCHANT SHIPPING IN THE USSR

Summary

In contrast to the position of the USSR as a world power, the Soviet merchant fleet ranks well down the list when compared with the merchant fleets of other nations and is of little significance in world-wide merchant shipping operations. On the other hand, despite the limitations which its modest size imposes on its potential wartime capabilities, the Soviet merchant fleet is of vital importance to the USSR. Certain areas of the USSR depend upon merchant shipping for virtually all of their transport requirements. The importance and vulnerability of Soviet merchant marine activities are further indicated by the fact that, should the merchant fleet be damaged or immobilized in time of war, little of the traffic normally carried by sea could be diverted to land routes. The over-all strategic limitations of Soviet merchant shipping will not be surmounted until a radical change in the nonaggressive merchant marine policy of the USSR occurs.

Although the Soviet merchant marine is under the control of the Minister of the Merchant Marine, the various shipping companies appear to be allowed considerable independence in operation and to be subject only to political supervision and the over-all requirements of the Five Year Plans. The Soviet merchant fleet, employing about 30,000 persons, totals 1,952,822 gross registered tons (GRT), of which 517,725 GRT comprise US Lend Lease vessels. The fleet is widely distributed, 510,239 GRT being in the Baltic and the Arctic, 354,662 GRT in the Black Sea, and 1,087,921 GRT in the Far East. Tonnage consists mostly of cargo and combination ships, tankers representing only 125,150 GRT of the total. The capabilities of the USSR for expanding the size of its merchant fleet either by domestic construction or by the purchase of vessels abroad are considered to be relatively minor. Present domestic production of ocean-going merchant tonnage is estimated to be less than 50,000 GRT annually. Acquisition of foreign shipping through either direct purchase or construction contracts has been negligible--only about 50,000 GRT annually from all sources.

The USSR has a number of excellent ports on all its seacoasts, with the exception of the Siberian coast line. The Northern Sea Route, though limited by seasonal factors, is an important new area of operations for Soviet shipping, and a gradual expansion of ports along the route can be expected. The principal factor limiting the capacity of Soviet ports is that many of them are ice-bound for long periods of the year. In spite of the great strides which the USSR has made in overcoming the physical limitations of weather upon merchant shipping operations, ice and weather will inevitably remain a major problem.

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The Soviet merchant fleet is engaged primarily in routine operations between its own ports and those of the Soviet Bloc and Western Europe. While ocean traffic between the USSR and foreign ports is carried chiefly by foreign-flag ships, domestic operations are conducted almost exclusively by Soviet tonnage. Export traffic consists generally of raw materials and bulk products, while imports are largely finished goods. Little or no reliable data are available on the volume of Soviet maritime traffic. Estimates of the present ton-kilometer performance vary between 38 billion and 84 billion annually, the latter figure being the probable annual goal of the Fourth Five Year Plan (1946-50). It is estimated that the total cargo lift of the fleet is about 2.5 million long tons .

Foreign-owned tonnage at present is, as in the past, a major factor in meeting the shipping needs of the USSR. While the USSR can charter large amounts of dry cargo tonnage, any great increase in the present rate of chartering probably would meet with effective opposition from the West. In the event of war, however, the USSR probably would acquire a considerable amount of tonnage through seizure of shipping in occupied areas. Such seizure might more than double the present size of the Soviet fleet.

The standards of operation of the Soviet merchant marine, including maintenance, operating efficiency, and other aspects of merchant shipping activities, are well below those of the West, a situation aggravated by conflicting Soviet direction and poor administration. Some degree of improvement in the performance of the merchant fleet could be brought about by better maintenance and repair if the Soviet authorities so desired, but there seems to be little likelihood that the necessary measures will be initiated in peacetime. In wartime, on the other hand, the importance of water transport to the Soviet war effort might make such measures imperative.

The material and manpower requirements of the Soviet ocean-going merchant fleet appear to be substantial. Steel requirements are estimated at 46,500 metric tons annually, while the fuel oil requirements were estimated in 1949 to total 924,180 metric tons annually.

I. Introduction.

1. Importance.

The principal importance of Soviet merchant shipping in global strategic terms lies in the support which it could give in time of war. In these terms the Soviet merchant fleet represents a critical weakness. Strong military forces cannot be transported across long stretches of open water and supported from

home bases without adequate shipping. The merchant fleet which the USSR now controls is only of moderate size and, therefore, is insufficient to permit Soviet participation in large-scale intercontinental warfare, a major weakness which can be remedied only by the following:

a. Domestic construction, presently almost nonexistent;
b. Purchase of foreign tonnage, being carried out only to a minor degree;
c. Construction in foreign yards, now proceeding at a very slow rate; or
d. Capture and defections, in the event of rapid Soviet advances in Western Europe.

Merchant shipping is of basic importance to the Soviet economy. Many areas of the USSR depend upon coastal shipping for a major portion of their transport requirements, the areas along the Northern Sea Route and the Pacific coast north of Vladivostok being particularly dependent upon coastal shipping. In addition, there are other areas where the loss of shipping facilities would seriously affect the Soviet economy. For example, in areas along the Baltic coast and the Black Sea it is probable that present rail lines could not handle even minimum requirements if water transport were lost.

Despite its importance to the economy of the USSR, the Soviet merchant fleet is small in comparison with the merchant fleets of other world powers. The ocean-going merchant fleet of the USSR, including 517,725 gross registered tons (GRT) of US-owned Lend Lease vessels, 1/* totals 1,952,822 GRT, or about 2.7 percent of the world merchant fleet. 2/ The Soviet fleet, however, is occupied primarily with domestic and Soviet Bloc traffic and is of virtually no importance in world-wide maritime transport operations, of which it handles much less than 1 percent. Reliable traffic data are not available, and estimates of the 1950 ton-kilometer performance of the Soviet ocean fleet range all the way from 38 billion ton-kilometers to as much as 84 billion ton-kilometers. The figure of 38 billion ton-kilometers is believed to be close to actual performance.

2. Historical Development.

Russian maritime operations date from the earliest history of the country, but merchant shipping in terms of organized operations began in 1876, when a small fleet, financed by national subscription, was founded for the express purpose of reducing Russian dependence upon foreign bottoms, principally British. A substantial fleet, however, did not exist until after the Russo-Japanese War in 1904. In the following decade, progress was rapid. By 1913 the fleet had grown to well over a million GRT of ocean-going ships, and there were Russian shipping agents in over 50 foreign cities. 3/ Despite this

* Footnote references in arabic numerals refer to sources listed in Appendix B.

progress, the Russian merchant fleet was incapable of meeting the demands made upon it. In 1914, for example, 92 percent of Russian exports and 86 percent of imports were handled by foreign ships. 4/ The fleet was largely antiquated when Russia entered World War I in 1914, but it consisted of about as much ocean-going tonnage as that to which the USSR now has a clear title (see below). 5/

After 1917 the development of the merchant fleet became a matter of urgency to the USSR because of the shortage of foreign exchange, the large requirements for imports, and the need to export. The fleet, which had almost disappeared during and after the Revolution, was rapidly built up by the purchase of foreign ships and a little domestic construction. This enabled the USSR to reduce somewhat its previously almost complete dependence upon foreign tonnage, but it still depended upon foreign shipping for a major part of its maritime transport requirements. Expansion of the merchant fleet continued during the First (1928-32) and Second (1933-37) Five Year Plans, and by 1939 the USSR had 1,136,000 GRT of ocean shipping.

World War II losses were substantial, and in June 1945 the Soviet-owned merchant fleet, not counting Lend Lease ships totaling 638,000 GRT, had declined to 943,791 GRT. Including US-owned vessels, however, the USSR had much more shipping in 1945 than in 1939. Since the end of World War II, reparations, salvage operations, and acquisitions from the Satellite countries have steadily built up the merchant fleet to its present level.

The following table illustrates the size of the Soviet merchant fleet by selected years as reported by the US Maritime Administration:

Size of the Soviet Merchant Fleet
1939, 1945-51

Year	Gross Registered Tons Tonnage
1939	1,136,000
1945	943,791 a/
1946	1,238,000 a/
1947	1,306,000 a/
1948	1,299,000 a/
1949	1,324,000 a/
1950	1,365,000 a/
1951	1,435,097 a/

a. Excluding Lend Lease tonnage, which in 1951 totaled 517,725 GRT.

3. Organization.

Although limited in scope, the available information on governmental organization with respect to the Soviet merchant fleet is quite reliable.

The Soviet ocean-going fleet is under the authority of the Ministry of the Merchant Marine, whose Minister is assisted by five deputies. The various Divisions of the Ministry control and direct such activities as planning, finance, operations, inspection, and training. The merchant marine itself is divided into three main fleets: the Northwestern, the Southern, and the Far East fleets. These, in turn, are divided into numerous operating companies, which appear to be responsible for activities in specific geographic areas. Tanker operations are under the control of the Chief of the Tanker Fleet within the Ministry. At least three separate tanker companies operate in the Black and the Caspian seas. Tankers in the Baltic and Northern areas are under the immediate control of the Chief of the Tanker Fleet, while the Far East tanker fleet handles such shipping in that area.

The individual companies within the various Soviet merchant fleets apparently operate as do non-Soviet steamship companies, including the maintenance of traffic and the collection of fares and freight charges. The chief difference appears to be that Soviet shipping companies must contend with the ubiquitous transport plan and the supervision of political commissars who scrutinize all aspects of operations. 6/

The extent of control which the Soviet Navy exerts over merchant shipping operations is not precisely known, but there is evidence that the armed forces do have considerable authority over operations in certain areas such as the Far East and the Far North. The Minister of Merchant Marine is currently an admiral, and many naval officers hold high positions in the Ministry. There are indications, moreover, that merchant ships always are available to serve as naval auxiliaries whenever requirements for additional naval tonnage arise.

II. Volume of Traffic.

Information on the volume of Soviet merchant shipping is reasonably adequate, except for the years immediately preceeding World War II.

1. Prewar.

In 1937 the Soviet merchant fleet carried 29 million metric tons of freight and, contrary to the general impression, handled a substantial part of Soviet foreign trade. In that year, for example, half of all exports by water was carried in Soviet ships. The 1931 figure, by contrast, was only 4 percent. Soviet shipping, however, carried a smaller proportion of purely domestic trade before World War II than at present. The foregoing figures, from a Soviet trade source, are believed to be accurate. 7/

In the prewar years, Leningrad in the northwest, Vladivostok in the Far East, and Odessa and Batum on the Black Sea were by far the most important ports in the USSR. Nearly half of all Soviet exports passed through Black Sea ports, while Baltic ports handled about 75 percent of all imports. Some trade with the large ports, however, was spread gradually between other newly expanded ports in these areas, to the extent that by 1939 each region of the USSR had increased considerably the number of its important ports and thus reduced many of the bottlenecks in freight movements. In the Black Sea, for example, the development of petroleum and ore exports was responsible for the building and expanding of numerous ports such as Poti, Batum, and Tuapse.

2. World War II.

During World War II the operations of the Soviet merchant fleet were confined largely to Lend Lease traffic in the Atlantic and in the Far East and to local activity in the Baltic and White seas. Use of a number of the major ports in the Black Sea was lost for varying lengths of time, and traffic was routed through other smaller ports in the area. The merchant marine was used very little in regular commerce, being pressed into service to support military operations with such uses as supply ships and armed raiders. Probably the most important function of the merchant fleet was to carry Lend Lease traffic.

3. Postwar.

Little specific information is available on the postwar volume of Soviet ocean-going traffic, and the scanty data which have been compiled are subject to wide error, possibly as much as 25 percent or more. It has been estimated that ocean freight performance amounted to 40 billion to 45 billion ton-kilometers in 1947. 8/ The Soviet press has announced that the Plan goal for 1950 was fulfilled by 102 percent. Estimates on the actual 1950 performance of the Soviet merchant fleet vary widely between a lower limit of 38 billion ton-kilometers and an upper limit of 84 billion ton-kilometers. It is believed, however, from an analysis of data on Soviet shipping, that the lower limit, 38 billion ton-kilometers, is close to the actual performance.

III. Capabilities.

1. Basic Data.

Although the status of numerous Soviet ships has not been reported for some time and detailed information is not available on many port facilities, information is generally accurate and adequate for broad evaluations. A description of the gaps in intelligence material on merchant shipping is contained in Appendix A.

a. Port Facilities and Installations.

The considerable amount of basic data on Soviet port facilities and installations is believed to be reliable.

The USSR has a number of good ports on all of its sea frontiers, with the major exception of the Siberian coast. In the west on the Gulf of Finland there is Leningrad, the leading port of the USSR. This port, severely damaged during World War II by the long German siege from August 1941 to early in 1943, has largely been repaired. Leningrad is the main terminus of Soviet Baltic Sea traffic and accounts for half of all Soviet imports. The city and its surrounding area, moreover, produce almost one-quarter of the industrial output of the USSR, 9/ which makes traffic through this port of major importance. Leningrad also is the terminus of several of the small number of cargo and passenger liner services of the USSR. Ships from Leningrad call at London, Western European ports, and Scandinavian ports on fairly regular schedules.

The port of Leningrad has been supplemented, and to some degree supplanted, by the acquisition and expansion of the ports along the Baltic. Among these ports are Kronstadt, Tallin, Riga, Lepaya, and Kaliningrad. In addition to their importance as ports for the Baltic traffic with Satellite areas, some of these, especially Kronstadt, are of major importance as naval bases.

In the Black Sea and the Sea of Azov there are a number of ports of major importance to the Soviet Union, the principal ones being Odessa, Novorossisk, and Batum. Odessa handles a large volume of general cargo for the southwestern area of the USSR, Novorossisk is a leading port for grain exports, and Batum is the major oil port in the Black Sea. In addition to these ports, Poti is important for ore exports, among them manganese, while Tuapse exports oil. Mariupol, Kherson, and Nikolayev are grain ports. The Black Sea ports are in relatively good condition, all major war damage having been repaired.

The Far Eastern ports were undamaged and have been considerably expanded in recent years. The major port in the Soviet Far East at present is Vladivostok, but it is likely that the building of other ports such as Sovetskaya Gavan, Petropavlosk, Nakhodka, and Nagaevo will gradually reduce Vladivostok's preeminence. Control of the ports of Port Arthur and Dairen, nominally in Chinese territory, will further augment the Soviet potential for handling its Far East maritime traffic. In the Far North the development of the Northern Sea Route has been a major goal of the USSR for a number of years. Ports, notably Tiksi and Provideniya, have grown up, and the continued expansion of traffic along this route will make the ports of Murmansk, Archangel, and Molotovsk even more important than at present. Furthermore, a number of other ports that in the past have been little more than anchorages along this route will become important ports, if present plans are carried out.

The principal factor limiting the capacity of Soviet ports is that many of them are icebound for long periods of the year. For example, Leningrad is icebound for periods ranging from 15 to 20 weeks each year. Other important ports in the northwest also are inactive during winter. Most ports in the Far East are closed for long periods because of ice. Vladivostok is kept open only by the constant use of icebreakers, while other ports such as Petropavlosk,

Sovetskaya Gavan, and Magaevo remain closed. The limitations caused by winter weather in the Far East have been offset to some degree by the extension of Soviet control over the Chinese territorial ports of Dairen and Port Arthur, which are open all year. Black Sea ports are not greatly impeded by ice conditions, and they too are open the year round, although Kherson and Nikolayev must be kept open by the use of icebreakers. Along the Northern Sea Route, ice obviously constitutes the overriding limitation on traffic. Despite all efforts, the navigation period still is confined to 3 or 4 months of the year, and it is not likely that the navigation season will be greatly extended.

b. Size, Condition, and Distribution of the Merchant Fleet.

The statistical information available on the Soviet merchant fleet is believed to be accurate to within 10 or 15 percent. The nonstatistical information is considered to have only a very narrow margin of error, as the size, condition, and distribution of the ocean-going fleet is known with considerable accuracy.

The Soviet merchant fleet totals 1,952,822 GRT, of which 517,725 GRT comprise US Lend Lease vessels to which the USSR does not have a clear title. Cargo ships and combination ships comprise the major portion of the fleet, tankers accounting for only about 125,150 GRT. Combination ships, which now form an important segment of the fleet, are especially important because of their adaptability for use as troop transports. However, the fleet largely consists of old and slow vessels of small and medium size which are far below maritime standards generally accepted throughout the world for economic operation and which are too slow to compete with foreign bottoms. Seventy-five percent of Soviet merchant vessels are under 5,000 GRT, while 95 percent are under 7,500 GRT. Exclusion of US-owned Lend Lease tonnage, moreover, would raise the "under 5,000 tons" percentage even higher. Of the 104 ships in the 5,000- to 7,500-ton group, 72 are Lend Lease ships. Less than 2 percent of the Soviet tonnage is made up of ships over 10,000 GRT. About 57 percent of the total tonnage, including Lend Lease ships, is over 20 years old, and about 9 percent is over 40 years old. If the US-owned tonnage is excluded, about 61 percent of the tonnage is over 20 years old and 12 percent over 40 years old. 10/ Sixty percent of the ships are in the 10- to 12-knot category. Only 9 percent of the ships, amounting to 13 percent of the tonnage, are capable of more than 13 knots. Of the Lend Lease ships, 75 are in the 10- to 12-knot group, and the remaining 8 are in the group under 10 knots.

The Soviet merchant fleet is distributed as follows: 510,239 GRT in the Baltic and Northern Sea Route areas, 354,662 GRT in the Black Sea, and 1,087,921 GRT in the Far East. 11/ Concentration of Soviet shipping in the Far East has been going on steadily for several years. In previous years the fleet was divided rather evenly between the three above-mentioned areas, and the build-up of the Far Eastern fleet appears to have been brought about by fairly equal withdrawals from both the Baltic and the Black seas. Analysis of the fleet disposition reveals that most of the large ships are in the Far East and in the Black Sea. The majority of large passenger ships which might be used for troop movements are concentrated in the Far East.

The Soviet merchant fleet uses coal as fuel to a greater degree than that of any other major power. About 62 percent of the ships, representing 45 percent of the total tonnage, depend upon coal for fuel. There is a significant variation in the types of fuel used by the various Soviet fleets. Coal is used by 80 percent of the Northwestern fleets, while only 40 percent of the Black Sea ships depend upon coal. In the Far East, 56 percent of the fleet uses coal. It appears that instead of converting to oil or disposing of coal-burning ships, the USSR, insofar as possible, has merely shifted ships to those areas where suitable types of fuel are available. 12/

The Soviet merchant fleet operates primarily in Soviet and Satellite ports, engaged principally in routine trade operations. Baltic Sea trade probably accounts for the major portion of all trade, with the Black Sea trade next in importance. A large part of the Far East fleet ordinarily is engaged in supplying the requirements of the industrial complexes north of Vladivostok.

Exports in Soviet ships generally consist of such raw materials as lumber, grain, and ores, while imports largely are finished goods. The Soviet fleet, however, participates to only a minor degree in USSR trade with non-Bloc areas, for which the USSR predominantly uses Satellite and foreign tonnage.

Although the present traffic level of the Soviet merchant fleet is not known, there probably is at least a theoretical capability of considerably increasing performance without additions to the present fleet. Many vessels do not operate at maximum efficiency, because of such problems as poor cargo-handling and inordinately long lay-ups for repairs. The capacity of the fleet may be increasing very slowly by small acquisitions of tonnage abroad. These increments, however, do not much more than retard the increasing obsolescence of the present fleet.

c. Quantity and Quality of Maintenance.

According to fairly reliable information, maintenance of the Soviet merchant fleet is poor, being lower than the standards of Western nations. 13/ Consequently, the actual potential of the fleet is limited to well below its theoretical capacities. Press reports and articles in technical publications constantly harp on the deficiencies of the various fleets and individual ships. Ships operating without major repairs or performing excellent feats of cargo handling are praised extravagantly, indicating that the Soviet authorities are keenly aware of deficiencies and are interested in improvement.

Actual observation of Soviet ships while in foreign ports shows that conditions vary widely from one ship to another. While some ships are obviously dirty and neglected, others are clean and well cared for. One reason for this variation, aside from the temperament and attitude of the individual shipmaster, is the absence of repair and maintenance facilities in various parts of the USSR. It appears that some ports lack facilities for even routine repairs, so that ships in those areas are in poor condition, while

ships operating in other areas where facilities are available are likely to be in much better condition.

d. Efficiency of Operations.

The operating efficiency of the Soviet merchant fleet appears at times to be hampered by conflicting directions from various authorities. Ships often are given impossible tasks to perform by administrators who are far removed from actual operations. Such uninformed supervision greatly reduces the capabilities of the fleet to perform even at the low level which the generally poor state of the ships would permit. Under efficient direction the present load performance of the Soviet merchant fleet could be greatly increased.

e. Availability of Foreign Tonnage.

Data on the present availability of foreign tonnage to the USSR are only general in nature, but fairly accurate statistics probably could be obtained.

In recent years, foreign-flag tonnage has been a major factor in meeting the shipping requirements of the USSR. Despite the efforts under the various Five Year Plans to make the Soviet economy self-sufficient, the USSR still depends upon foreign ships to carry almost all of its foreign trade with non-Communist areas. 14/ The USSR uses its own and Satellite ships primarily for domestic traffic, while foreign-flag ships are used principally for trade between non-Bloc countries and the Soviet Bloc. The present employment of foreign tonnage by the USSR can be estimated only very roughly, with a margin of error possibly as high as 50 percent. Estimates of foreign tonnage now under charter to the USSR, for example, range from 200,000 to 500,000 GRT.

National policies and the attitudes of private shipping interests in the chartering countries toward the chartering of shipping to the USSR are the determining factors in the amount of such tonnage made available.

2. Present Capabilities.

a. Total.

The total lift capabilities of the Soviet merchant fleet have been estimated at about 2.5 million long tons. 15/ This over-all figure is based upon the actual known capacities of a number of Soviet ships and is considered to be a reasonable estimate.

b. By Areas.

Soviet water transport capabilities for personnel and dry cargo generally are greatest in the Far East, with the Black Sea fleet next. Tanker lift is about the same in the Far East and in the Black Sea. The Baltic and Arctic areas have virtually no tanker capacity.

c. By Type of Cargo.

The capabilities of the Soviet merchant fleet are greatest with respect to dry cargo, the lift capabilities of the ocean-going tanker fleet probably being the weakest aspect of the Soviet maritime potential.

3. Potential Capabilities.

a. New Construction.

Rough estimates of Soviet capacity for construction of new merchant ships range from 25,000 to 50,000 GRT annually of ocean-going shipping (including only vessels of 1,000 GRT and over). On the other hand, a brief study made in 1949 of over 400 Soviet shipyards engaged in construction and repair of ocean and inland craft resulted in the conclusion that even the figure of 25,000 GRT was well above Soviet capabilities at that time. Actual capabilities at present are believed to be insignificant for either replacements or additions to the fleet. Soviet capabilities for construction of new merchant ships in wartime is not believed to be a factor of importance, since, as at present, ship construction capabilities will be almost entirely devoted to naval construction.

b. Foreign Acquisitions.

The USSR at present is not acquiring any significant amount of merchant ship tonnage from foreign sources, probably not more than 50,000 GRT annually. The Satellites are building a number of small craft for Soviet account, and plans have been made for the construction of ships of about 5,000 GRT each in Satellite yards, but such vessels are likely to stay on the drawing board for some time to come. Foreign acquisitions will not alter the Soviet maritime potential significantly, with the possible exception of some slight improvement in tanker transport capabilities. For example, in January 1951, Lloyd's Register reported that 37 ships totaling 41,664 GRT were under construction in Western shipyards for Soviet account. Some of these were ocean-going ships of value to the fleet, but it is evident that on the average they were too small to be of any great importance. Poland is acquiring considerable merchant tonnage abroad, however, including some tanker tonnage, and it is possible that some of these vessels eventually may be transferred to the Soviet fleet. In any case, they are likely to be operated under Soviet control. The USSR has indicated its interest in obtaining ships from Western owners, but very few thus far have been acquired. In the past the reluctance of Western governments to deal with the USSR, combined with US pressure against such transactions, has halted the transfer of any appreciable tonnage. At present the high price of ships and the general demand for tonnage has militated against Soviet acquisitions of foreign shipping.

In the event of a war in which the USSR overran Western Europe and thereby acquired the shipyards substantially intact, the Soviet shipbuilding capacity would be increased at least twentyfold, even excluding the capacity of the UK (about 3 million GRT annually).

c. Increased Chartering.

Under present conditions the USSR can charter dry-cargo tonnage without much difficulty. If its efforts in this regard should be greatly increased, however, a resulting rise in world prices might well act as a brake on Soviet charters. World tanker tonnage at present is rather tight, and it is unlikely that the USSR could increase its tanker tonnage through chartering. On the other hand, the charter of even 10 T-2 tankers, or their equivalent, would double the present ocean-going tanker fleet.

In the event of war, cost would be no object, and the USSR theoretically might be able to acquire enough tonnage to double its present merchant fleet if it moved quickly and bought or chartered tonnage from neutral countries before the West could counter such a move.

d. Seizure of Foreign Tonnage in Soviet Ports.

In the event of a sudden outbreak of war a considerable amount of foreign tonnage probably would be found in Soviet ports. On the basis of available data, estimates of Western shipping in Soviet ports at any given time could be made to indicate the tonnage which might be seized.

e. Capture of Shipping through Occupation of Western Areas.

The amount of shipping which the USSR would acquire by occupation of Western Europe cannot now be accurately estimated. Barring a complete dispersal of foreign shipping from Continental ports before Soviet occupation of Western Europe, however, the USSR would almost certainly acquire a large amount of tonnage. On the basis of rough estimates, it appears that there are about 5.5 million GRT of ocean-going shipping in Western European ports, excluding the UK, at any given time. A large part of this tonnage would escape or be sunk or scuttled, but the remainder probably would be sufficient to more than double the present Soviet merchant fleet.

f. Defections from the West.

The extent of possible defections from the merchant fleets of the West is difficult to estimate. The risk of defection probably would be greatest in the merchant fleets of France and Italy, which now total about 5,800,000 GRT, or nearly three times the size of the Soviet fleet. Communist members and sympathizers are strong in the merchant shipping industry of those countries. Some steps probably would be taken in the event of war, however, to minimize the risk of vessel defections to the USSR, and these measures, if carefully organized, might be effective. Even a small percentage of the combined French-Italian fleet, however, would represent a substantial addition to the Soviet fleet.

g. Diversion of Traffic to Other Means.

It is not possible at present to estimate, except in a most general way, the potential capabilities of the USSR to divert ocean freight traffic to other means. The possibility that the USSR could divert much traffic from coastal or ocean shipping to land routes is not great, but some traffic might be diverted in certain areas. The railroads might be utilized to absorb some of the traffic that now moves by water along the coasts. This expedient would be necessary in the event of an effective blockade of Soviet ports.

At present, much traffic goes north out of Satellite areas to Baltic ports for transshipment to the USSR. It is unlikely that existing rail lines could handle all of this traffic, which would have to be rerouted from the Baltic in case of a tight blockade or air attack. In the Black Sea, possibilities for the diversion of ocean traffic to rail lines are equally poor. Domestic traffic in this area consists largely of oil, grain, and ore movements across the Black Sea to Odessa and other ports for shipment inland. The rail lines in this area probably could not handle the bulk cargoes that would be thrown upon them by effective hostile action against shipping.

In the Far East the absence of a rail network capable of handling bulk commodities in large quantities over and above normal commitments would preclude any large-scale diversion of ocean-borne freight to overland rail lines.

h. Improved Maintenance and Repair.

Some degree of improvement in ship maintenance and repair could be brought about, but unless Soviet planners assign a higher priority to ocean transport than it apparently has at present, it is unlikely that there will be any substantial change in the near future. In wartime, on the other hand, and particularly if no general blockade were in effect, water transport might be so important that the USSR would be forced to improve maintenance and repair. In that event, merchant ships probably would come under direct military control, as in World War II, and efficiency might increase considerably.

i. Increased Efficiency of Operations.

Soviet concern with the poor performance of the merchant fleet is evident in press criticism and also in official Soviet data, obtained from various sources. A priority high enough to remedy this situation apparently has not been decreed, and, therefore, there is little prospect for improvement. In any event, it is extremely doubtful that efficiency in merchant marine operations would increase in time of war unless merchant shipping activities were placed under naval command.

IV. Materials and Manpower Requirements.

1. Principal Materials.

Present annual steel requirements of the Soviet merchant fleet are estimated to be 46,500 metric tons of finished steel, broken down as follows: ship construction, 15,500 tons; ship repair, 31,000 tons. 16/

The fuel oil requirements of the Soviet ocean-going merchant fleet were estimated in 1949 at approximately 924,180 metric tons annually. This figure was derived from a detailed study of the composition of the fleet in 1949 (there has been no significant change since that time), to which was applied by adjustment the 1937 figure for oil consumption in the merchant fleet as reported in the Soviet official publication Planovoye Khozyaistvo (Planned Economy). This estimate of the fuel consumption of oil-burning ships, which constitutes 55 percent of all Soviet ocean-going tonnage, was checked against actual known consumption figures of certain Soviet merchant ships and is believed to be accurate to a high degree.

2. Manpower.

a. Indirect Employment.

Few data are available upon which to base estimates of the manpower employed in other industries supplying the requirements of the Soviet merchant marine. Insofar as ship construction is concerned, it is known from US experience during World War II that for every 100 workers in the shipyards about 138 were employed in producing the materials required in the shipyards.

b. Direct Employment.

On the basis of data given in the Third Five Year Plan (1938-42), total employment in the Soviet merchant marine is estimated to be about 30,000 persons, a figure believed to be accurate within 10 or 15 percent.

c. Skill Distribution.

On the basis of reports by prisoners of war and other observers, it may be concluded that Soviet shipyard workers generally are not highly skilled in ship construction or repair work. Fragmentary data contained in POW reports and Soviet press and official statements indicate, moreover, that technical skills and job aptitudes in the merchant marine are of a lower caliber than in the Western merchant fleets. The tables of organization of Soviet ships are known to be comparable to those of Western ships with one important exception: they generally are overmanned in the lower ratings.

V. Limitations, Intentions, and Vulnerabilities.

1. Limitations.

Its modest size, its inefficiency, and the adverse weather conditions under which it operates are important limitations of the Soviet merchant fleet. Possibly the principal single weakness in the composition of the fleet is the shortage of tankers, which sharply limits the capability of the USSR to draw upon available sources of supply in world petroleum markets or to transport its own oil production by sea to distant areas of consumption. The tanker shortage, however, is of importance mainly in peacetime because the Soviet ability to move oil in tankers during hostilities would be limited basically by lack of naval power to protect tankers on the shipping lanes. Throughout the Soviet merchant fleet, operating efficiency is substandard, largely because of the abnormal average age of the vessels, the low level of training, and inadequate repair facilities. Weather limits Soviet maritime operations, mainly because of the severe ice problems encountered in Soviet northern waters but also because of bad fog conditions in various areas. In fact, the Soviet merchant fleet operates under the worst weather conditions confronting the fleet of any world power. Divided into segments separated in some cases by thousands of miles, the fleet also suffers in peacetime from inflexibility. This disadvantage would be more critical during hostilities, when the fleet probably would be unable to transfer vessels between its isolated areas of operation, except in occasional instances.

It is difficult to explain why the Soviets have adopted a merchant shipping policy which allows such limitations restricting Soviet freedom of action, particularly in terms of any large-scale global strategic commitments for merchant shipping requiring the transportation of large armies across the seas. It is true that the failure of the USSR to play a major role in world-wide trade is consonant with its determination to conceal the gaps in its economic self-sufficiency program and to limit international contacts to those activities which are indispensable to its economic existence or which directly further its world political objectives. Furthermore, the USSR may not desire at present to promote maritime trading, because international tensions subject its commercial relations to constant rebuffs throughout a large part of the world. Another factor delaying expansion of the Soviet merchant fleet has been the preoccupation of Soviet planners with other commitments that take priority in requirements for steel and shipyard capacity over merchant shipping. The wide disparities in priorities clearly indicate that large tonnages of merchant shipping will not come off the ways in the USSR until Soviet naval expansion has reached some undisclosed level of development.

These considerations do not explain, however, the Soviet lack of aggressiveness in purchasing vessels abroad or in contracting for ship construction in foreign yards. It may be that the USSR had not foreseen, at least until recently, intercontinental warfare and, accordingly, had geared its economic and military development to the possibility of hostilities on the

Eurasian land mass only. If so, this is of great significance to the US, for it would mean that the USSR has admitted, to itself at least, that it cannot invade and conquer the US and that a stalemate is its maximum capability at this time. In this case the Soviets might view the merchant marine as a relatively impotent weapon which would be quickly driven by enemy blockade from the high seas into the shaky security of Soviet harbors and the restricted waters of the Soviet perimeter. Such an attitude on the part of the Soviets would no doubt be somewhat tempered by their hope that a rapid advance to the Channel and the Bay of Biscay at the outset of hostilities would result in extensive captures and defections of merchant vessels, thus securing sufficient ready tonnage to carry out whatever shipping activity the Soviet Navy and Air Force could protect as well as acquiring shipbuilding capacity.

The over-all strategic limitations of Soviet merchant shipping will not be overcome until a radical change in Soviet policy occurs. The present rate of acquisition of new tonnage does little more than offset the advancing obsolescence of the fleet and in no case represents substantial progress toward building up a powerful merchant marine commensurate with the stature of the USSR as a major power.

Potentially, however, the USSR could make rapid progress in merchant marine development. Shipyards now occupied with naval orders are capable of turning out merchant vessels, and shipbuilding capacity could be expanded considerably from domestic resources. In addition, if the USSR were willing to pay world prices, more foreign tonnage could be acquired. The USSR evidently is more interested in obtaining tanker tonnage abroad than dry cargo ships, and enough tonnage may be acquired through construction or purchases abroad in the next 3 to 5 years to improve petroleum lift capabilities considerably.

On the other hand, any great progress in overcoming present operational limitations within the next few years is unlikely, principally because the Soviet merchant fleet does not have the requisite economic priorities. Prospects for improving the present inadequate repair facilities do not appear bright. The repair of merchant ships requires a high degree of skill and much specialized equipment, frequently requiring more skill than is necessary to build a new ship. The USSR appears to be greatly deficient in both the skills and the equipment required for the very substantial repair and maintenance program essential to placing the present merchant fleet in prime condition or for maintaining a minimum level of operational efficiency in the event of war. Training facilities may be improved and greatly expanded to furnish technically competent crews, but such progress will take time.

In spite of the great strides which the USSR has made in overcoming the physical limitations of weather upon merchant shipping operations, ice and weather will inevitably remain a major problem.

2. Intentions.

Among the various Soviet shipping developments which might be indicators either of changes in shipping policy or of broader political and military policies and intentions are the following:

a. Sudden unexplained departures of Soviet merchant vessels from foreign ports;
b. Continued absence of Soviet shipping traffic from certain foreign areas;
c. Steady build-up of the Soviet merchant fleet in the Far East;
d. Possible covert meetings at sea of Soviet merchant vessels with Soviet naval craft, perhaps for fuel transfers;
e. Acquisition of potential troop-carrying vessels;
f. Transfers of Soviet floating dry docks to the Far East;
g. Expansion and improvement of port facilities.

Most of these activities have in the past reflected purely economic factors. Some have merely revealed Soviet administrative confusion. They must be continually surveyed, however, because their recurrence in combination, or in more extreme form, might provide positive indicators of military developments.

The intentions of the USSR with respect to its merchant marine also would be frequently revealed by careful observation of Soviet shipping operations. For example, accurate knowledge of large-scale acquisitions of new tonnage, changes in the criteria for the retirement of obsolete vessels, build-ups in given areas, modifications in the volume or pattern of Soviet shipping activities on routes to non-Communist ports, and alterations in the chartering policies of the USSR on both "out" and "in" charters usually would permit definite conclusions to be drawn.

To translate such conclusions into useful estimates concerning broader courses of Soviet action will not always be possible, particularly with respect to the intentions of the USSR in terms of localized or large-scale hostilities. The Soviet merchant fleet at present is essentially an economic instrument and, as such, will probably expand somewhat in keeping with the general economic development of the USSR. It also will be subject to occasional sudden and severe readjustments, as are the merchant fleets of any country, to satisfy unanticipated localized requirements or other purely economic demands. Shipping developments of an innocuous nature and those carrying dangerous strategic implications must, therefore, be carefully differentiated if they are to serve as indicators of Soviet intentions. Probably the most important indicator of major Soviet moves would be a Soviet shift from a passive to an aggressive shipping policy, a development which would have important, and possibly ominous, implications.

3. Vulnerabilities.

a. Peacetime.

The economy of the USSR could be dislocated seriously by a general Western refusal to construct, charter, or sell tonnage to the USSR or to permit Western vessels to carry any cargoes for direct or indirect Soviet accounts. The US, in particular, could bring strong pressure on numerous other maritime nations to take such action. Such action by the West would make the continuation of Soviet foreign trade impossible on the present basis, because the Soviet Bloc now depends upon Western ships (in terms of numbers of vessels) for 90 percent of all of its maritime traffic with the rest of the world. Adoption of such a policy by the West might affect the USSR as follows:

(1) Reduce the flow of strategic materials from overseas areas;
(2) Force a realignment of stockpiling operations in the Far East and possibly other areas;
(3) Weaken economic ties with the Satellites by reducing the ability of the USSR to supply intra-Bloc maritime transport as required;
(4) Complicate Soviet economic planning by curtailing the receipt of foreign exchange through exports;
(5) Require withdrawals of shipping from that portion of the fleet now engaged in domestic traffic, if any foreign trade of consequence were to be maintained. This would have repercussions on other domestic forms of transportation.

The US alone could cripple the maritime operations of the USSR if effective action to repossess the US-owned Lend Lease ships now operated by the Soviet Union were possible. These ships account for slightly more than 25 percent of Soviet ocean-going tonnage and actually represent an even larger part of the USSR maritime transport potential, since they are, on the whole, better than the average Soviet vessel. Repossession, however, is dependent upon so many factors that it is unlikely.

The West could further harass and hamper Soviet shipping operations by refusing to furnish fuel, especially oil, at Western-controlled bunker stations, by such techniques as slowdowns against Soviet ships in Western ports, by holding up papers, and by searching ships thoroughly. While these latter tactics might be trivial in isolated instances, a determined campaign of harassment on the part of all Western nations would have a damaging effect upon Soviet shipping.

b. Wartime.

Western surface and air attack against Soviet shipping would reduce its operations on the high seas to no more than occasional movements. With Western air supremacy, attacks could be made in strength against even the relatively protected closed areas, such as the Baltic, Black, and Caspian seas. Economic warfare measures, such as preclusive buying and chartering of vessels, would deny to the USSR materials useful in shipbuilding, maintenance, and repair and would reduce the tonnage available to the USSR for use in whatever areas it might at any time still be able to protect. Various transport control measures, moreover, such as the wartime navicert system, or an extension of it, would greatly reduce the volume of blockade-running by the Soviets.

As a result of such Western military action and economic warfare, substantial Soviet trading with overseas areas could be interdicted, the USSR would be incapable of mounting and supporting overseas operations requiring the use of large military contingents, and close-in shipping operations in support of nearby military campaigns would be in constant danger of insupportable losses. Thus Soviet transport capabilities eventually would be limited to the interior Eurasian lines of communication in the USSR.

APPENDIX A

GAPS IN INTELLIGENCE

The present lack of detailed and accurate data on Soviet merchant shipping traffic during World War II is a serious deficiency in estimating actual Soviet capabilities for both war and peace. Data on efficiency of merchant shipping operations, particularly on intra-Bloc operations, are poor and constitute an important deficiency. The lack of intelligence on Soviet capabilities for constructing merchant ships makes it difficult to estimate Soviet ability to replace war losses from domestic resources. Lack of accurate knowledge on the extent to which non-Soviet shipping interests have chartered shipping to the USSR leaves a gap in knowledge of Soviet peacetime transport capabilities. Moreover, the lack of detailed information on materials, and particularly on manpower, creates a serious difficulty in appraising demands of the merchant shipping fleet upon the over-all economy. However, adequate information is available on the economic significance of the Soviet merchant fleet, although serious gaps exist in traffic data.

I. Introduction.

2. Historical Development.

Data are available for detailed studies, although this subject is not of sufficient interest to warrant an exhaustive research project.

4. Organization.

Although the broad organizational features of the Soviet merchant fleet are known, there is little reliable information on the interrelationships of the various agencies or the extent of control exerted in the Soviet armed forces. There is a good deal of apparently unrelated data regarding operations by individual Soviet shipping agencies, but this information would require coordination and analysis before evaluation.

II. Volume of Traffic.

Considerable statistical data exist for a study of the volume of merchant shipping traffic before World War I, although before World War II the Soviet policy of secrecy on traffic statistics became stricter and data filed with the League of Nations are scanty.

III. Capabilities.

1. Basic Data.

a. Port Facilities and Installations.

Although there are many detailed studies by the Departments of the Army and the Navy, the sources generally are somewhat out of date and therefore not necessarily accurate. Although deficiencies are remedied to some degree by reports from ship personnel calling at Soviet ports, the strict security regulations at these ports severely restrict the coverage of such reports. Detailed analysis of existing information on Soviet ports and facilities probably would be of considerable value in raising to some degree the over-all reliability of basic data, but a major collection effort would be required to improve present information.

The capacities of Soviet ports have been studied in detail, and reliable estimates have been made. In addition to the ability of a port to load or discharge cargo, these studies also take into consideration the clearance facilities, such as rail and road routes, and capacities. Available data are believed to be reasonably accurate, although some information is old.

2. Present Capabilities.

a. Total.

Much more information than is presently available would be required to prepare a detailed statement. Such data are available in ONI and are believed to be accurate to within 10 or 15 percent.

b. By Areas.

Estimates of capabilities by areas can be made within a small range of error, adequate information being available in ONI. To arrive at an accurate figure at any time would require merely statistical treatment of the characteristic of the ships known with reasonable certainty to be in a given area.

3. Potential Capabilities.

a. New Construction.

Although there is little valuable information, this deficiency is not serious. Partial surveys have been made by ONI and other agencies.

b. Foreign Acquisitions.

Information is fairly good on this important subject. Although considerable information is available to CIA and ONI, no definitive studies are possible. A detailed list of requirements has been issued for collection, and it is hoped that additional data will become available.

c. Increased Chartering.

Information is only fair.

d. Seizure of Foreign Tonnage in Soviet Ports.

No studies are known to have been made. If the detailed data contained in Lloyd's Shipping Index on movements of merchant ships can be appropriately processed, a serious gap in information will be substantially eliminated.

g. Diversion of Traffic to Other Means.

No studies are known to have been made. The potential capabilities of diversion in peacetime, however, could be estimated roughly. This would require detailed studies of traffic movements and capabilities by rail, highway, and water, both inland and coastal. While some data of reasonable reliability are available, the over-all data required for this survey are not believed to be available in sufficient detail. Any information which might be obtained, furthermore, probably would be subject to considerable error, since the information could come only from derived data or Soviet-published reports. Even data based upon official reports which might be covertly secured would not be completely reliable, since it has been shown that such statistics often are substantially untrue. It is estimated that the best studies which could be made might be as much as 20 percent in error.

h. Improved Maintenance and Repair.

A sufficient number of reports from scattered areas are available to make possible a more detailed analysis of Soviet capabilities regarding improved maintenance and repair.

i. Increased Efficiency of Operation.

Although a considerable amount of fragmentary material is available, no detailed studies are known to exist.

IV. Materials and Manpower.

2. Manpower.

c. Skill Distribution.

No comprehensive data or detailed studies are known to exist.

~~S-E-C-R-E-T~~

APPENDIX B

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